Evaluating National Urban Planning: Is Dutch Planning a Success or Failure?

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**Introduction**

Planning on a national level performs a different function to planning on a local level. Uncertainty plays a larger role, as national planning is often more abstract, i.e., local government has its own responsibilities for the precise location of activities, and zoning of land use. National planning is a process in which public and private agencies each play a different role, and neither of these agents can control the outcome. This paper is about the evaluation of one aspect of Dutch national planning: the concentration of urban development, in which there is a tradition of different government agencies each having a different role in planning (Faludi and Van der Valk 1994) This paper examines how to evaluate a complex national urban planning policy.

Measuring the success of planning starts with the question “What is planning?” (Talen 1997). An answer given by Needham (2000) is that planning may be considered to be a ‘design discipline’, creating knowledge for the improvement of planning practice. This concept of planning as a design discipline or a ‘design science’ (Van Aken 2004) has an impact on the evaluation, so this paper will ask what a design science is, how design relates to processes, and how design may be evaluated. Based on
these aspects there is, in relation to the development of technology, quite an extensive body of recent literature that has not previously been introduced in discussions on planning evaluation. This theoretical part of this paper is concluded by a section on evaluating planning as a design discipline linked to sources on planning literature. In this section, a link will be made with the debate on planning literature between proponents of the criterion of performance (i.e. has the plan showed the way to better decision-making? (Faludi 2000)), and proponents of the criterion of conformance (i.e. is spatial development according to plan? (Talen 1997; Laurian et al. 2004)). The conclusions from the theoretical part of the paper will be used to evaluate Dutch urbanisation policies. Conclusions are drawn both on what implications this has for other evaluations of complex planning and on the results of Dutch national planning.

**Design discipline**

Design sciences, such as engineering, medical sciences and planning can be compared to the formal sciences, such as mathematics and philosophy, and the explanatory sciences, such as the natural sciences, and major sections of the social sciences (Van Aken 2004). The mission of formal sciences is to build systems of propositions that are internally logically consistent. Explanatory science is about the explaining and prediction of observable phenomena. Design sciences are not about explaining phenomena, but about changing the facts (Eekels and Roozenburg 1991).

“The mission of a design science is to develop knowledge for the design and realization of artefacts, i.e. to solve construction problems, or to be used in the improvement of the performance of existing entities, i.e. to solve improvement problems.” (Van Aken 2004, 224; see also Van Aken 2005b)

In the literature on design sciences the term artefact (or artifact in American sources) is much broader than in plain English. ‘An artifact is an intentionally modified tool whose modified properties were intended by the agent to be recognized by an agent
at a later time as having been intentionally altered for that, or some other, use.’ (Dipert 1993, 29–30) Professionals, who must be able to translate general knowledge to ‘the unique and specific case at hand’, often use design knowledge (Van Aken 2004, 226).

Design not only deals with observable phenomena, but it also involves the investigation into systems that do not yet exist; “The main question thus becomes, ‘Will it work?’ rather than, ‘Is it valid or true?’” (Romme 2003, 558; see also Simon 1996) Or as Herbert A. Simon in one of his last paper states:

“Our task is not to predict the future; our task is to design a future (..), and then to devote our efforts to bringing this future about. We are not observers of the future; we are actors who, whether we wish or not, by our action and our existence, will determine the future's shape.” (2002, 601)

Based on Simon (1996) it can be stated that an artefact (the result of design process) has a dual nature. Artefacts are, on the one hand, physical objects that interact through causal connections, and which the laws of nature govern. On the other hand, an artefact has a function within a context of human action: it can be used as a means to an end (Kroes, 1998). Agents intentionally:

“… represent the world and act intentionally in it, and whose behaviour is explained partly in terms of reasons (and not causes). (…) One aspect of this latter conceptualisation is that certain activities are interpreted in terms of realisations of goals and that functions are attributed to certain objects or activities.” (Kroes 2002, 293–4)

Both function and physical characteristics together constitute the artefact or ‘technological object’. ‘The function cannot be isolated from the context of use of a technological object: it is defined within that context. Since that context is a context of human action, we will call the function a human (or social) construction.’ (Kroes 1998, 18) In a design process a bridge is made between a physical system and the function that will be performed by that system. The design not only gives a description of that system, but gives also an explanation of how the proposed system is able to perform the
required function. This technological explanation is an integral part of the design and ‘plays a crucial role in justifying a design’ (1998, 21).

Engineers are, in this way, able to bridge the gap between structure, described in a non-intentional language, and function, described in intentional language. The operational principle is that it ‘…connects structure and function on the basis of causal relations and pragmatic rules of actions based on these causal relations.’ (Kroes 1998, 34). One physical object may be used for different functions and one function can be realised in different ways. Although functions of objects are observer-relative, and do not impact on the physical conditions of an object, ‘…the practice of engineering, and more generally the practice of everyday life, show that functional claims contain genuine knowledge about the world which is different from knowledge contained in structural claims.’ (Kroes 2001, 8) Normativity plays an important role in the evaluation of functionality.

By itself, the physical structure does not have a normative impact; the collapse of a bridge is not a bad thing, just as stellar collapse is not bad. ‘A bridge that is prone to collapse is a bad bridge only because the physical structure plays a role in human practices, and has been designed to play this role by an engineer.’ (Houkes 2002, 262) In other words, an artefact must be placed in a context of human intentions, wishes and deliberations.

The research of both Kroes (2002) and of Vermaas and Houkes (2003) concludes that a theory that ascribes functions to an artefact on the basis only of the intentions of the agents that designed it is too limited, as many technological uses are based on the new functions of an existing instrument. Designers of an artefact may often have an idea of its proper use, and in this way are attempting to design human behaviour (Redström 2006; Kroes et al forthcoming). Architects do not only design houses, but may attempt
to design human activities. Urban designers have ideas on the proper use of cities, which have lead to debates with social science educated planners (Faludi 1996).

Consequently, this leaves us with the idea that the functions of an artefact must be part of an evaluation. We will later argue that evaluation of a plan (note that ”a plan” is an artefact in the definition used above), based on the intentions of a plan maker alone may be considered too limited as a plan may have new functions, outside the ones intended by the plan maker.

**Designing as Process, Processes of Design**

Design is a step in a process; it is a ‘model of an entity to be realized’ or ‘an instruction for the next step in the creation process’ (Van Aken 2005a, 391). A design is an artefact (a design can be characterised using this term) to produce another artefact. Van Aken indicates in this regard that designs may be over-specified. Or, the other way around, he proposes the ‘principle of minimal specification’ as ‘a complete design should only specify what the makers of an artefact need to realize that artefact’ (2005a, 391). So, design is a process of consecutive detailing, from rough sketches, via outlines to detailed designs. The principle of minimal specification does not only apply to the transition from design to realisation, but also to the design process itself, and this principle of minimal specification is especially important for a design process. In a design process with high uncertainty ‘… one should put more effort in role definitions, leaving the actual scheduling of activities to the individuals and groups assigned to these roles themselves.’ (Van Aken 2005a, 394) Design processes often must be sufficiently manageable, adaptable and robust to meet requirements in time, cost and quality.
The principle of minimum specification is, as has been stated above, especially important for the design of human action systems, as those are ‘driven by the thoughts and feelings of the actors in question’ (Van Aken 2005a, 397). Human actors are not determined by the design of a human action system, although they can be influenced. ‘A process-design for a design-process is realized through the internalization of the overall process-design by the designers in question and by a subsequent redesign by them of this overall design to a design of their own activities (…)’ (2005a, 397) A consequence is that process designers have much less control of the process than product designers have on a product. According to Van Aken this has the advantage that it saves time in designing the process in detail, but it also opens the possibility of ‘unmanaged deviations’ from the process design, leading to coordination problems at a later date.

Planning takes place in such a human action system and most plans are made to influence these kinds of systems, posing well known planning dilemmas between flexibility and commitment, or between continuity and change.

Evaluation of design, artefacts and planning

Design processes and artefacts can be evaluated. In a chapter on evaluation in his book on Artifacts, Art Works, and Agency, Dipert (1993) presents 5 types of dysfunctions in relation to artefacts:

1. The identification of an artefact is false
2. Although something is rightly identified as an artefact, there is no good conception of its purpose
3. An artefact is not an effective instrument to its purpose
4. The function the artefact may fulfil is currently not useful or
5. This function is not useful at all.

An evaluation of artefacts – and thus of planning – may be designed in such a way that one or more of these dysfunctions are assessed.
Although there are many debates about whether something is a ‘plan’, the debate is not about whether or not something is an artefact (which an archaeologist may have with an odd shaped stone), but about whether this artefact has the function attributed to plans. So an evaluation of planning usually starts with Dipert’s second point, and goes all the way through to point 5. This paper deals particularly with evaluation in relation to points 2 and 3. The debates on whether or not the containment of urban sprawl is desirable or not (in the present context, this fits within the debate on dysfunctions 4 and 5, and are highly relevant) is not the focus of this paper.

In relation to planning, the second point discusses: what is the function of plans? The question about the purpose of planning, both of plans as product and of planning as process, is however not always worked out in evaluation research. When we say that a certain planning instrument is not effective in pursuing a certain goal (failure type 3 in terms of Dipert), we are sometimes wrong, in that planning has been effective in addressing a goal which differs from the goal we assumed we were evaluating. So, using the Dipert classification, we have made a type 2 error in our evaluation.

Dipert gives another example from the performing arts.

“The particular conception of an assumed or intended audience was a component of the distinctive artifactual intention that characterizes its artifactuality. If the creator’s conceptualization of audience and its qualifications was both reasonable and clearly conceived, then the failure lies with the later audience or context, not with the creator or artefact. The failure of Machaut’s music to make students in Music History 101 think of God is hardly a problem with Machaut or his music.” (1993, 143)

This kind of debate is also familiar in planning, for example when planning instruments are transplanted from one institutional setting to another. We lack in this instance a firm concept of the instrument’s purpose in a certain context (De Jong 2004).

The dysfunctionality of type 3 can be judged by the standards of fulfilling a certain function (Dipert 1993, 145).
“The overall evaluation of whether an artifact of a certain sort does in fact fulfil its function (or how well it does so) is a relatively straightforward matter. We need only have a reasonably precise articulation of that function and some indication of how well the artifact succeeds in that function. A sufficient articulation of that function will be a description of the activity, or the contemplated change in the world, together with limitations or recommendations on the proper use of the tool for its purpose. This description must be cast in the terms of the description by which its maker understood the function.” (Dipert 1993, 146)

Dipert’s last point, that the description is in the artefact’s maker’s terms, is a matter of debate. Others argue (Preston 2003; but also Dipert 1993 himself, see also below) that the intentional use of an artefact may be relevant, for example, a screwdriver can be very functional to open cans of paint and a user may evaluate a screwdriver for performing this task alone. Dipert (1993), who wrote several papers on artwork, uses this argument because he wants to evaluate the quality of historic instruments in their own right. An eighteenth century screwdriver must not be evaluated on the way it can be used on screws made of contemporary hardened steel. However, if you want to use a screwdriver, and look for a good one, you may prefer a contemporary screwdriver as a better instrument for contemporary screws.

Dipert (1993) identifies two possible goals for the interpretation of artefacts, instruments and tools. The first one is the understanding of its historical genesis and history; that involves finding out its ‘deliberative history’ (1993, 87), and is about its purpose in relation to its original purpose. The second one is about functionality; to find out the most useful function an object can have. This latter goal is not bound by considerations of its historical purpose. ‘No agent or abstract loyalty to history (...) binds us to think of objects in certain ways or to use them in certain activities – certainly not its maker only in virtue of this historical relationship to the object.’ (1993, 89) Dipert considers the pursuit of a function of an object as the chief aim, and pursuing the historical origins may help with this task. He makes a great effort to look at the
relationship of how the inquiry into an object’s history (and historical purpose) may sometimes be the best way to achieve an understanding of all its functions. Dipert considers looking at its original purpose as the best strategy to come towards present functionality. However, he also makes clear that in certain conditions and circumstances this may not be the case. Complicating this question, according to Dipert (1993), is the fact that not all an artefact’s intended functions can be observed by looking at the artefact itself. This is especially the case with the ‘high-level intentions’ that include the behaviour that an acting agent wishes to cause in other cognitive agents.

This question of intent in relation to evaluation is also relevant for the evaluation of plans. Do we have to evaluate it according to the intentions of the plan maker at the time the plan was made, or the intentions of the user of the plan at the time it is employed?

Is the original function of something its proper function? According to Preston (2003), using an artefact for its original function may not be superior to using it for new functions. It may not even be more creative, as a new use ‘…endows existing artefacts with new functions by using them in novel ways’ (2003, 607). On the other hand; the design of new artefacts is not always very creative. Designs may be a variation of a standard type; many new cars are a variation of existing cars. Creativity cannot be the criterion that distinguishes design from use.

If we consider that the actual content of the agent’s intentions define the artefact’s ‘proper function’, it can consequently be stated that:

“…if proper functions are derivable from the intentions of designers, it seems they must be derivable from the intentions of users as well. In other words, if the purpose of the designer establishes the proper function of the artifact designed, then the purpose of the user must equally establish the proper function of the artifact used.” (Preston 2003, 608)
Based on her analyses, Preston (2003) argues for us to give up the idea that the proper function of a technical artefact should be attached to new artefacts. By doing this Preston stresses the importance of a social approach to the function of artefacts. It is not the designer of a new artefact that defines its proper function, but defining the proper function of an artefact is a social construction in which both the intention of the designer and the context of use may play a role.

**Evaluating planning as a design discipline**

The insights and debates on design, its process and its evaluation presented above, leaves open the question of how to place planning in this context. From the above discussion, it is clear that plans and other products of planning can be seen as artefacts, an evaluation must therefore take place in the context of the functions of these artefacts: plans and other ‘products of planning’ (Faludi 2000). The functionality by which a plan may be evaluated may be both the plan maker’s intended use, and the client’s intended use. If we follow the reasoning by Dipert (1993; see also Faludi 1986), it may be useful in the context of discovery to reconstruct historically the intended use of a plan. However in terms of justification, actual use and present functions should play a decisive role in evaluating the functionality of a plan, or another product of planning.

Needham (2000) considers the following differences between planning and regular design. Planning is often about what measures to take in order to influence the decisions of others: ‘Thus in most cases spatial planning is an *intervention in*, or an *influencing of*, the creation and use of the physical environment by others.’ (2000, 443) So planning is about policy design. The earlier discussion on design as a process shows that this aspect is not that different from other complex design processes, such as standardisation of file formats or accountancy standards. The insights about minimal
specification as a criterion for design in such cases (Van Aken 2005a) may also play an important role in planning. The multiplicity of aims that a planning agency is pursuing adds to the complexity of planning as design. It is often territoriality (Vigar and Healey 1999) that makes it necessary to take different factors into account, as different sectors, such as transport, housing and the use of land in a certain territory.

A selection of the many functions of a document called a ‘plan’ (see also Needham 2000) may have to include the following:

- A description of the present state of affairs
- A vision of a desirable future state of affairs
- A legal rule, which has to be complied with by the agency itself
- A legal rule, which has to be complied with by everyone
- A legal rule that has to be taken into consideration by the agency itself
- A legal rule that has to be taken into consideration by everyone
- An investment in future decision-making by placing it in a wider field of choice
- An overview of future subsidies
- A statement about future decisions
- A piece of propaganda aimed at the citizens
- A piece of propaganda aimed at other governments, i.e. to acquire grants, new legal instruments
- A vehicle for communicative action
- An intention to act
- A mixture of many of the functions described above and several other functions.

These functions are not always stated in the plan. Moreover, the actual function of a plan may differ from the plan maker’s intended function. The above section has shown that the ‘proper function’ of a plan may differ from the function intended by its maker. Quite often plans have a variety of functions. Measures interact, and a plan may have a function as a package of mutually coordinated measures (Needham 2000). Planning agencies often work in a context with great uncertainty, in which a plan is often used as a flexible framework for subsequent action.
The evaluation of planning may take into account what function a plan has, both when it was made, and while it is being used. However a third kind of functionality may also come into the evaluation, the function that a plan should have according to the evaluator. This may not be the function of the plan according to the plan maker, nor the plan user. This is not necessarily an incorrect conclusion. It may be very fruitful to evaluate whether an existing plan may be used for a new function. It must be clear however that neither the plan nor its present use are being evaluated, but instead the contribution or potential contribution that a plan may have for a certain function defined by the evaluator.

The now popular practice of performance measurement may be an example of this. The objective is to focus government on improving results for citizens by measuring results in terms of outcomes the citizens care about (Osborne and Gaebler 1992; Helling 1998). These outcomes are not necessarily the same as the goals of policy makers. The idea is that an organisation defines its products and services and develops indicators to measure its output in a planning and control cycle in order to improve the organisation’s performance (De Bruijn 2002). Performance measurement may have different forms, depending on the rationale behind measuring performance (Behn 2003), including for instance whether performance is measured in order to control subordinates or to celebrate successes. According to Behn (2003), there are eight different basic purposes of performance measurement, requiring different evaluation criteria.

Another example of an external criteria to evaluate planning is plan performance; does the plan contribute to an improvement of decision-making (Faludi and Korthals Altes 1997, Faludi 2000; Korthals Altes 2006)? The goal of planning is then considered to be a means of improving decisions by placing them in a wider field of choice (Friend and Jessop 1969; Faludi and Mastop 1982). The purpose of planning is not ‘to draw
pretty pictures of the future’ (Faludi and Mastop 1982, 245), but to solve problems in the present. As time is limited at the time that decisions must be taken, it may often help to pre-empt this by placing the decisions in a wider picture, by making a plan. This conception of planning is a main theme in the work of Simon (for example 1997; see also Bratman 1987; Faludi 1973). Although makers and users of the plan may not intend to undertake a rational deliberation of alternatives and to choose the best one, it may, nevertheless, be worthwhile to evaluate whether a plan does contribute to a rational justification of decisions. This normative stand to improve present practice is also the principle Needham (2000) defends. Rationality is not an empirical concept, but a norm. Although the classical concept of rationality in planning has been rejected ‘.yet no one dares to argue for a methodology of planning in which people should act irrationally.’ (Needham 2000, 440–1). The idea is that the quality of a decision is based on its justification (see Faludi 1986), in which plan makers and plan users communicate to establish the meaning using different codes, partly because the decisions are made in an uncertain environment (Faludi and Korthals Altes 1997).

To return to the rather long, but incomplete, list of functions of planning noted earlier makes it clear that a holistic evaluation of planning, or the claim that a plan is fully evaluated, is not very fruitful. Moreover, evaluation may be specific about what functions of a plan are being assessed, and that the results of the evaluation are valid only for the functions that are explicitly taken into account in the evaluation.

As stated at the beginning of the paper, two major measures of success in planning are the match between intention and implementation, and whether the plan resulted in better decisions. Conformance between plan and implementation, the first of these two criteria, assumes that the plan provides the preferred solution; and that the plan is there to make this solution real. The function of the plan is to be implemented
literally, as the plan provides the best framework for action. Conformance may be measured in absolute or in relative terms, for example, ‘how far the original intentions were carried through to the final result’ (Knudsen 1988, 552) is often used as a measure of success in planning. The idea is that, with the conformance criteria, evaluators possess a ‘tangible, objective measure of planning success’ (Talen 1997, 577) in a context that plans function as blueprints (Laurian et al. 2004). The other approach to measuring success is the performance principle, the idea that planning is an investment to place decisions in a wider field of choice and must lead to an improved justification of decisions. The application of these two approaches for assessing the success of plans will be illustrated by the Dutch urbanisation policies (see also Korthals Altes 2006).

The case of Dutch urbanisation policies

The Fourth Memorandum on Spatial Planning Extra (also known by its Dutch acronym VINEX, and a plan according to article 2a of the Dutch Law on Spatial Planning) is central to the traditional core issue in Dutch national urban planning: the management of urban growth (Korthals Altes 1992) by urban containment. The thought behind these concentration policies has been that urban regions would function as compact daily urban systems. Concentration policies were supposed to maintain the support for urban services, to limit mobility or commuting growth, to allocate housing, employment and facilities to optimise accessibility by bicycle and public transport, and to contain the further urbanisation of rural areas. In addition to concentration policies to locate new housing and commercial areas within urban regions, there were also criteria for the choice of locations within concentration areas.

Based on the memorandum, contracts were drawn up directly with several urban regions (see also Korthals Altes 1994) and with the provincial governments for the other
urban regions on the containment and development of urbanisation between 1995 and 2005. The contracts covered funds for housing, public transport infrastructure and soil clean-up, providing that the city regions were to build 456,959 homes in the 26 urban regions between 1995 and 2005, in accordance with the wishes of central government (Needham and Faludi 1999; Korthals Altes 2006).

It was not obvious that the policy would be implemented, as it was based on a number of daring assumptions in relation to the co-operation of lower-tier governments, infrastructure provision and market demand (Needham and Faludi 1999). Notably the context on these three aspects was in flux as the Dutch welfare state was being restructured and undergoing decentralisation. Between World War 2 and 1990, government policy was geared towards supply; producing homes, particularly social housing. Social rental housing in the Netherlands expanded from 12% of the housing stock in 1945 to 44% in the early 1990s (Boelhouwer 2002). Government subsidies for the building of social housing were abolished in the past ten years (Priemus 1995). The housing sector became more market oriented. The transformation process has been facilitated by a huge rise in house prices – 339% – between 1982 and 2002 (NVM 2003).

Dutch municipalities have traditionally played an active role in land development; they engage in ‘direct development’ by acquiring land, providing infrastructure and selling the serviced plots to developers and housing associations (Needham 1997). All this is costly and takes time, and, in so doing, municipalities depend on co-operation and government grants, which were usually forthcoming (i.e., the implementation of spatial policies in developments seemed to be unproblematic). Consensus between governments combined with government grants was, in many cases, a guarantee for the implementation of spatial development plans.
Aspects such as neglect of the production of building land in the eighties, changing market conditions (which made the housing development processes more viable) and the decentralisation of government grants contributed to a change of the roles of municipal government and other players in urban development (Korthals Altes 2000; Louw et al. 2003; Verhage 2003). Growth in the proportion of market sector housing meant an average increase of sale prices for serviced land, which resulted in early acquisition of land by developers in certain locations (Needham 1997; Korthals Altes 2000) and private-sector parties abandoning their policies of not buying raw land (Korthals Altes 2000). Today, local government plays a crucial role, and is becoming a hybrid organisation, as it not only acts as an independent government above market agents, but is also active on the market itself; servicing and selling land in competition with development companies. New forms of public-private partnership are emerging and influencing strategic planning and land development practice (Louw et al. 2003).

**Conformance analysis of concentration policies**

The contracts for the concentration areas add up to a total growth of 456,959 housing units between 1995 and 2005. Between 1 January 1995 and 31 December 2004 the housing stock grew by 669,955 dwellings, of which 66.5% is located in concentration areas (Table 1).
Table 1 Growth of Housing stock in concentration areas and other areas (CBS 2005)

<table>
<thead>
<tr>
<th></th>
<th>Concentration areas</th>
<th>Other areas</th>
<th>Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area of Land’ in km²</td>
<td>7,219</td>
<td>26,669</td>
<td>33,889</td>
</tr>
<tr>
<td>1995 Housing stock</td>
<td>3,744,574</td>
<td>2,447,348</td>
<td>6,191,922</td>
</tr>
<tr>
<td>2004 Housing stock</td>
<td>4,189,995</td>
<td>2,671,882</td>
<td>6,861,877</td>
</tr>
<tr>
<td>1995-2005 Housing stock growth</td>
<td>445,421</td>
<td>224,534</td>
<td>669,955</td>
</tr>
<tr>
<td>Correction for administrative changes</td>
<td>−33,178</td>
<td>33,178</td>
<td></td>
</tr>
<tr>
<td>Corrected 1995–2005 Housing growth</td>
<td>412,243</td>
<td>257,712</td>
<td>669,955</td>
</tr>
</tbody>
</table>

1. This excludes the area of water (7,637 km²)

The figures in Table 1 on the expansion of administrative borders are less impressive, but still show a net concentration towards the concentration areas. This containment of growth is reinforced by ‘restrictive’ policies. In other words, the approval of new building capacity outside the concentration areas has been more selective than in the past (Figure 1). This data indicates that conformance is high, although not complete, and that VINEX policies had a considerable impact on this. So we must evaluate this policy positively in relation to the conformance criteria (see also MVROM 2005, 6).
According to these figures, housing stock growth has made a slow start in the concentration areas, but has been on target since 2000. Housing stock growth elsewhere has been above targets. This is not because housing stock growth in other areas has risen, but because the reduction of house building in other areas has been less than planned for. However, in the Dutch debate, stagnation of house building is considered a major problem, because of the combination of exploding house prices and falling house-building output (Boelhouwer 2005). VINEX is often not considered to be a planning success story. This is not only because of the stagnation in house building, but there are also questions about the underlying targets of the policy, the quality of the locations, and the working of market forces on the locations (Korthals Altes 2006). Typically critics expect planning to meet other demands than conformance to pre-set targets. Is performance, as opposed to conformance, a better criteria to evaluate the functions of plans?
**Performance analysis of concentration policies**

Performance analysis, that assesses whether a plan results in improved decision making, is less tangible than conformance analysis. A three-step research design devised by Faludi and Korthals Altes (1997; see also Korthals Altes 2006) is used to evaluate performance:

1. Identification of the decisions that the plan should influence.
2. Identification of the commitments that are being made in these decisions, identification of the arenas in which these decisions are justified.
3. Assessment whether all or part of the plan helped in shaping the codes used in justifying subsequent decisions, and, if so, whether the quality of the justifications concerned improved in terms of taking account of the wider field of choice.

**Identification of decisions**

The idea is that the plan is not only a framework for the implementation contracts, but also helps in setting subsequent policies to meet uncertain developments, such as the changing demands for housing. A strategic plan must also be able to adapt to changes in both spatial and sector policy views, as new governments take office. Although changes in demands and political priorities are likely, the direction of these changes remains uncertain.

**Identification of commitments and arenas for justification**

Between 1995 and 2005, there was an agreed commitment to conclude contracts with city regions and provinces on the housing programme. A new housing policy was then introduced, and for the period 2005–2010, local governments were asked to prepare plans based on high forecasts of need (Faludi and Korthals Altes 1996). The contracts for the 1995–2005 period did not cater for changes in demand. Moreover, because
locations and housing size were specified, neither did they have the flexibility to meet
known demands by preparing excess plan capacity when housing production on one
location stagnated. One exception to this was the Amsterdam region, which requested
flexibility, as they were unable to predict housing growth at a major location on a land
reclamation site in a lake. The formal ratification of the contracts took place in
parliament, which not only received copies of the contracts, but also debated the policy
with the minister on numerous occasions. A parliamentary commission also put much
effort into critically assessing the policy, including the idea of negotiating with local
government to make contracts (see also Needham and Faludi 1999). The policy also
attracted criticism among professionals and in articles in general newspapers and
magazines. The government policy to overcome the stagnation in the production of
housing has been the subject of debate in the same arenas.

Performance analysis of plan
There is a clear, strong relationship between the Fourth Memorandum Extra and the
commitments made in the implementation contracts. However, it is questionable
whether this strong commitment was necessary and whether it would have been more
helpful if the plan involved a less prescriptive type of contract, allowing room for extra
housing production in response to demand (Korthals Altes 1995, 301–2). The Dutch
national government’s ambition was to withdraw from urbanisation policies for a
decade by handing the responsibility to local governments, and paying them grants
based on accountancy reports that established if performance targets were being met.
However, new information is emerging. For example, housing demand has grown
considerably in the 1990s, and political consideration of new knowledge on housing
needs and new political aspirations are seen as necessary in the Dutch context.
Moreover, financial analysis of green-field plans has shown that the government grants have been unnecessary due to the large increase in housing prices and the subsequent price of serviced land (Kolpron 2000). The Fourth Memorandum Extra plays hardly any role in the debate on housing stagnation, because housing growth complied with planning (Figure 1), and the stagnation relates to new political ambitions. A sign of this non-performance is that no information is available on the Ministry of Housing, Spatial Planning and the Environment's website.

*Explanation of different outcomes in this case*

Working with ten-year contacts seems not to meet Van Aken’s (2005a) principle of minimal specification. The national government made binding agreements for a ten-year period and put all grant money into these covenants. By doing so, the government sacrificed flexibility for new policies. The VINEX plan does not contribute towards the discussion surrounding breaking the stagnation in house building; moreover, this stagnation was planned stagnation (Figure 1). This inflexibility was not only the case in relation to housing numbers, but also in relation to the grants. Over € 900 million has been allocated to the provinces and urban regions to fund the gap for the losses in developing the VINEX areas. These areas were not only on simple rural sites, but were sometimes much more expensive to develop, for example building on an airport at Ypenburg in The Hague, greenhouses, (e.g. Wateringse Veld in The Hague, Leidsche Rijn in Utrecht (Verhage, 2003) and Waalsprong near Nijmegen) and land reclamation at IJburg in Amsterdam. Due to a booming housing market in the 1990s, these grants were, generally speaking, not necessary as market developments made it possible to finance the costs of infrastructure provision, including cross subsidisation of costs by providing plots for affordable housing (Kolpron 2000).
The background for the discrepancy between performance and conformance analysis is that we currently know a lot more about the present situation and present goals than we knew in 1990, when the draft of the Fourth Report Extra was made. Measuring conformance involves taking a plan based on old knowledge as a way of measuring success. To evaluate whether the plan has been a coercive force is an acceptable analysis and this analysis establishes to what extent agents in spatial development have obeyed the will of the planning agency as has been stated in the plan. The function of Dutch national planning documents is, however, different. These planning documents provide guidelines that, amongst other issues, must be considered when making decisions at a later date. The plan does not contain precise decisions on the location of facilities themselves. It is not zoning ordinance.

The plan also has a role in organising different agencies around a planning policy. Dutch national planning reports play an important role in sustaining Dutch spatial planning doctrine (Faludi and Van der Valk 1994). This organisation takes place before a planning report, and it is not necessary to freeze this process after publication of the plan.

Since the beginning of the 1990s many unforeseen and unforeseeable developments have taken place. Based on this new understanding the planned decrease in housing stock growth and the grant for the costs of infrastructure provision were no longer necessary. The new market demands have led to a different appreciation of the quality of the locations to be developed. The covenants of central government with local government did not cater for these developments, as they were not known when the negotiations took place.

Moreover, the difference in outcomes can be explained, as it seems that performance (rather than conformance) is in this case a criteria that fits better with the
function of Dutch national planning. There were many developments in the context of
the plan and there was a need to adapt to new information. Conformance may be
interpreted as a tangible criteria, a failure to adapt planning polices to a new
understanding of uncertainty.

Conclusion

Conceptualising planning as a design science opens the way to analyse planning based
on a broader literature of theory on the work of design professionals in engineering,
law, medicine, etc. in which technological rules (Van Aken 2004) play an important
role.

A plan can be considered to be a technical artefact, which not only has a physical
appearance, but also a function within a certain context of human action (Kroes 2002).
This context of human action is changing over time, so the function of a plan in the
context of use, may be different from the intended context, as there is uncertainty about
the development of this context. In other words; the function of a plan in use may differ
from the original plan maker’s purposes. The dual nature of such an artefact means that
the function is not a property without value of the artefact itself, but is attributed to it.
Based on different concepts of the function of plan in a particular context of human
action, different evaluations may be made. Therefore, evaluation is not a holistic
exercise, but an analytical exercise, which does no more than establish whether plans
meet the functions that are chosen for assessment. This evaluation may be based on the
functions intended by the plan maker, it can also be based on the functions a plan has
when in use, or it can even be based on third party functions that the evaluator considers
to be relevant.
At a national level, planning tends to be directed towards the longer term and many agencies have a role in subsequent decision-making after the plan has been validated. Using different valuation criteria may lead to entirely different outcomes. Dutch urbanisation policies show that a rather high conformance between plan and later development can go together with a low performance of the plan in subsequent decision-making. It is therefore essential to discuss the functions of planning first before beginning any evaluation.

Based on the experiences of the Dutch case, it may be concluded that conformance is no sign of the possibility of being able to use new chances or to learn, but is an essential measure of the control of future developments by the plan, and the organisation behind it.

This experience of the limitations of conformance has a parallel in design sciences in which there are opinions that over-specification of a design of a human action system is not very fruitful, as it hinders subsequent steps in the process. This does not involve not making commitments at all. For example, in the Dutch policies, there were large complex housing development sites close to the cities. Critics said that Dutch local government spent too long negotiating with central government on the urbanisation covenants, instead of being active in developing these locations.

An alternative criteria, that looks at the way plans contribute to better decision-making later in the process, leaves more room for evaluating whether plans have the right degree of specification. It also meets the idea that the function of technical artefacts may go beyond the intentions of the producer of the artefact, because it considers whether a plan has contributed to a better justification for a decision. The case of Dutch urbanisation planning shows that conformance and performance are
independent criteria. A plan with a high conformance between the plan and later developments, may be evaluated negatively on the criteria of performance.

References
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